



**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application No.: **09/599,194**  
Filing Date: June 22, 2000  
Applicant: Nathan M. DENKIN et al.  
Group Art Unit: 2633  
Examiner: Chau M. Nguyen  
Title: **APPARATUS FOR DETECTING RAMAN GAIN IN AN  
OPTICAL TRANSMISSION SYSTEM**  
Attorney Docket: 29250-000986/US

U.S. Patent and Trademark Office  
220 20<sup>th</sup> Street S.  
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\\

January 12, 2005

**INFORMATION DISCLOSURE STATEMENT**

Sir:

Pursuant to 37 C.F.R. §§ 1.56, 1.97 and 1.98, Applicant hereby submits an Information Disclosure Statement for consideration by the Examiner.

**I. LIST OF PATENTS, PUBLICATIONS, AND OTHER INFORMATION**

The patents, publications and other information submitted for consideration by the Office (except unpublished U.S. patent applications) are listed on Form 1449 attached hereto.

**II. COPIES**

A. ☒ Submitted herewith is a legible copy of (i) each U.S. patent application publication and U.S. and foreign patent; (ii) each publication or that portion which caused it to be listed; (iii) for each cited pending U.S. application, the application specification including the claims, and any drawing of the application which caused it to be listed including the claims directed to that portion; and (iv) all other information or that portion which caused it to be listed.

B. ☐ Any patents, publications or other information which are listed on Form 1449 or on the copies of PTO-892, but which are not enclosed herewith, were previously cited by or submitted to the PTO in one of the following applications which has been relied upon for an earlier filing date under 35 U.S.C. § 120:

U.S. Serial Number

U.S. Filing Date

C. ☐ Because the present application was/is being filed after June 30, 2003, no copies of the U.S. patents or U.S. patent application publications which are listed on the attached Form 1449 are enclosed pursuant to the waiver of 37 C.F.R. § 1.98(a)(2)(i). Any foreign patent documents or non-patent literature listed on the attached Form 1449 are enclosed herewith.

D. ☐ This is a PCT application in the entry of the National Phase in the United States. A copy of the International Search Report is attached for the Examiner's information. The documents listed on the International Search Report are listed on the attached Form-1449 for consideration by the Examiner and for listing on any patent resulting from this application. Since the International Search Report was from the US, EPO, or JPO search authorities, copies of these references should have been supplied to the USPTO under the trilateral agreement and are believed to be in the file of the above-identified application. (MPEP 1893.03(g))

III. CONCISE EXPLANATION OF THE RELEVANCE (check at least one box)

A. ☒ Except as may be indicated below in (B), all of the patents, publications or other information are in the English language (concise explanation not required).

B. ☐ A concise explanation of the relevance of each patent, publication or other information listed that is not in the English language is as follows (see 37 C.F.R. § 1.98(a)(3)):

1. ☐ See the attached foreign patent office communication from a counterpart foreign application:
2. ☐ English translations are provided for:
3. ☐ Other:

C. ☐ The following additional information is provided for the Examiner's consideration.

IV. CROSS REFERENCE TO RELATED APPLICATION(S)

A. ☐ The Examiner is advised that the following co-pending application(s) contain(s) subject matter that may be related to the present application. By bringing this(these) application(s) to the Examiner's attention, Applicant(s) does(do) not waive the confidentiality provisions of 35 U.S.C. § 122.

Serial No.

Filing Date

Art Unit

V. THIS IDS IS BEING FILED UNDER

A. ☐ 37 C.F.R. § 1.97(b): (check only one box)

1. ☐ within three months of the filing date of a national application other than a continued prosecution application under § 1.53(d) (37 C.F.R. § 1.97(b)(1)). No fee or certification is required.

2. ☐ within three months of the date of entry of the national stage as set forth in §1.491 in an international application (37 C.F.R. § 1.97(b)(2)). No fee or certification is required.

3. ☐ before the mailing of a first Office Action on the merits (37 C.F.R. § 1.97(b)(3)). No fee or certification is required. In the event that a first Office Action on the merits has been issued, please consider this IDS under 37 C.F.R. § 1.97(c) and see the certification under 37 C.F.R. § 1.97(e) below; or, if no certification has been made, charge our deposit account a fee in the amount of \$180.00 as required by 37 C.F.R. § 1.17(p).

4. ☐ before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No fee or certification is required.

B. ☐ 37 C.F.R. § 1.97(c): (check only one box)

☐ before the mailing date of either any Final Office Action under 37 C.F.R. § 1.113, a Notice of Allowance under 37 C.F.R. § 1.311, or an action that otherwise closes prosecution.

1. ☐ No certification; therefore, a fee in the amount of \$180.00 is required by 37 C.F.R. § 1.17(p).

2. ☐ See the certification below. No fee is required.

C. ☒ 37 C.F.R. § 1.97(d):

☒ after the mailing date of either a Final Office Action under 37 C.F.R. § 1.113 or a Notice of Allowance under 37 C.F.R. § 1.311, yet on or before payment of the issue fee.

1. ☒ See the certification below. A fee in the amount of \$180.00 is required by 37 C.F.R. § 1.17(p).

VI. CERTIFICATION UNDER 37 C.F.R. § 1.97(e): (check only one box)

The undersigned hereby certifies that:

- A. ☒ each item of information contained in this IDS was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS (See 37 C.F.R. § 1.97(e)(1)). See further statement under 37 C.F. R. 1.704(d) below in section VII, if applicable; or
- B. ☐ no item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this IDS was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this IDS (See 37 C.F.R. § 1.97(e)(2)).
- C. ☐ Some of the items of information were first cited in a communication from a foreign patent office. As to this information, the undersigned hereby certifies that each item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby certifies that no item of this remaining information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this IDS was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this IDS.

VII. STATEMENT UNDER 37 CFR 1.704(d)

The undersigned hereby states that:

☐ each item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. 1.56(c) more than thirty days prior to the filing of this IDS.

VIII. PAYMENT OF FEES (check only one box)

- A. ☒ A check in the amount of \$180.00 is enclosed for the above-identified fee.
- B. ☐ Please charge Deposit Account No. 08-0750 in the amount of \$180.00 for the above-indicated fee. A duplicate copy of this paper is attached.

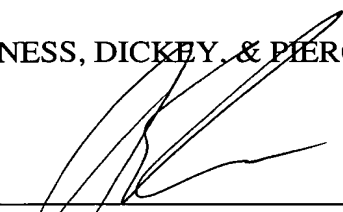
The above references are being cited only in the interest of candor and without any admission that they constitute statutory prior art, contain matter which anticipates the invention, or which would render the same obvious, either singly or in combination, to a person of ordinary skill in the art. Furthermore, this Information Disclosure Statement shall not be construed as a representation that a search has been made.

If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule (with a petition if necessary) and charge the appropriate fee to Deposit Account No. 08-0750.

Please charge any additional fees or credit any overpayment pursuant to 37 C.F.R. § 1.16 or § 1.17 to Deposit Account No. 08-0750.

Respectfully submitted,

HARNES, DICKY, & PIERCE, P.L.C.

By   
John E. Curtin, Reg. No. 37,602  
P.O. Box 8910  
Reston, Virginia 20195  
(703) 668-8000

JEC/psy

Enclosures: ☒ Form PTO-1449(s)  
☒ Documents  
☒ Foreign Search Report  
☒ Fee  
☐ Other:

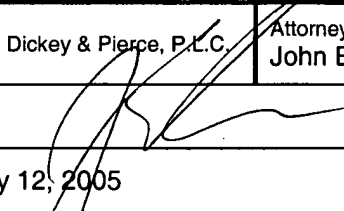
93 / 2633 / 14

HDP/SB/21 based on PTO/SB/21 (08-00)

Please type a plus sign (+) inside this box → +

|   |                        |                         |
|---|------------------------|-------------------------|
| <b>OIP TRANSMITTAL FORM</b><br>(to be used for all correspondence after initial filing)<br>JAN 12 2005<br>PATENT & TRADEMARK OFFICE | Application Number     | 09/599,194              |
|   | Filing Date            | June 22, 2000           |
|   | Inventor(s)            | Nathan M. DENKIN et al. |
|   | Group Art Unit         | 2633                    |
|   | Examiner Name          | Chau M. Nguyen          |
|   | Attorney Docket Number | 29250-000986/US         |

| ENCLOSURES (check all that apply)  |  |  |         |  |
|--|--|--|---------|--|
| <input checked="" type="checkbox"/> Fee Transmittal Form<br><br><input checked="" type="checkbox"/> Fee Attached<br><br><input type="checkbox"/> Amendment<br><br><input type="checkbox"/> After Final<br><br><input type="checkbox"/> Affidavits/declaration(s)<br><br><input type="checkbox"/> Extension of Time Request<br><br><input type="checkbox"/> Express Abandonment Request<br><br><input checked="" type="checkbox"/> Information Disclosure Statement<br><br><input type="checkbox"/> Certified Copy of Priority Document(s)<br><br><input type="checkbox"/> Response to Missing Parts/Incomplete Application<br><br><input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Assignment Papers (for an Application)<br><br><input type="checkbox"/> Letter to the Official Draftsperson and _____ Sheets of Formal Drawing(s)<br><br><input type="checkbox"/> Licensing-related Papers<br><br><input type="checkbox"/> Petition<br><br><input type="checkbox"/> Petition to Convert to a Provisional Application<br><br><input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address<br><br><input type="checkbox"/> Terminal Disclaimer<br><br><input type="checkbox"/> Request for Refund<br><br><input type="checkbox"/> CD, Number of CD(s) _____ | <input type="checkbox"/> After Allowance Communication to Group<br><br><input type="checkbox"/> LETTER SUBMITTING APPEAL BRIEF AND APPEAL BRIEF (w/clean version of pending claims)<br><br><input type="checkbox"/> Appeal Communication to Group (Notice of Appeal, Brief, Reply Brief)<br><br><input type="checkbox"/> Proprietary Information<br><br><input type="checkbox"/> Status Letter<br><br><input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):<br><br><b>Form PTO-1449 w/3 references Foreign Search Report</b> |         |  |
| <table border="1"><tr><td>Remarks</td><td></td></tr></table>   |  |  | Remarks |  |
| Remarks  |  |  |         |  |

| SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT |   |               |                |
|--|---|---------------|----------------|
| Firm or Individual name                    | Harness, Dickey & Pierce, P.L.C.  | Attorney Name | John E. Curtin |
|  |   | Reg. No.      | 37,602         |
| Signature                                  |  |               |                |
| Date                                       | January 12, 2005  |               |                |

|  |
|--|
|  |
|--|



☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 180

Complete if Known

|                      |                  |
|----------------------|------------------|
| Application Number   | 09/599,194       |
| Filing Date          | June 22, 2000    |
| First Named Inventor | Nathan M. DENKIN |
| Examiner Name        | Chau M. Nguyen   |
| Art Unit             | 2633             |
| Attorney Docket No.  | 29250-000986/US  |

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account:

Deposit Account Number 08-0750

Deposit Account Name Harness, Dickey & Pierce, PLC

The Director is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Credit any overpayments  
☐ Charge any additional fee(s) during the pendency of this application  
☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

| Large Entity |          | Small Entity |          | Fee Description        | Fee Paid |
|--------------|----------|--------------|----------|------------------------|----------|
| Fee Code     | Fee (\$) | Fee Code     | Fee (\$) |                        |          |
| 1011         | 300      | 2011         | 150      | Utility filing fee     |          |
| 1012         | 200      | 2012         | 100      | Design filing fee      |          |
| 1013         | 200      | 2013         | 100      | Plant filing fee       |          |
| 1014         | 300      | 2014         | 150      | Reissue filing fee     |          |
| 1005         | 200      | 2005         | 100      | Provisional filing fee |          |

SUBTOTAL (1)

(\$ 0)

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

| Total Claims       | Extra Claims | Fee from below | Fee Paid |
|--------------------|--------------|----------------|----------|
| -20 **             | 0            | 0              | 0        |
| Independent Claims | -3 **        | 0              | 0        |
| Multiple Dependent |              |                | 0        |

| Large Entity |          | Small Entity |          | Fee Description  | Fee Paid |
|--------------|----------|--------------|----------|--|----------|
| Fee Code     | Fee (\$) | Fee Code     | Fee (\$) |  |          |
| 1202         | 50       | 2202         | 25       | Claims in excess of 20                                     |          |
| 1201         | 200      | 2201         | 100      | Independent claims in excess of 3                          |          |
| 1203         | 360      | 2203         | 180      | Multiple dependent claim, if not paid                      |          |
| 1204         | 200      | 2204         | 100      | ** Reissue independent claims over original patent         |          |
| 1205         | 50       | 2205         | 25       | ** Reissue claims in excess of 20 and over original patent |          |

SUBTOTAL (2)

(\$ 0)

\*\*or number previously paid, if greater; For Reissues, see above.

FEE CALCULATION (continued)

3. ADDITIONAL FEES

| Large Entity |          | Small Entity |          | Fee Description  | Fee Paid |
|--------------|----------|--------------|----------|--|----------|
| Fee Code     | Fee (\$) | Fee Code     | Fee (\$) |  |          |
| 1051         | 130      | 2051         | 65       | Surcharge - late filing fee or oath  |          |
| 1052         | 50       | 2052         | 25       | Surcharge - late provisional filing fee or cover sheet.                    |          |
| 1053         | 130      | 1053         | 130      | Non-English specification  |          |
| 1812         | 2,520    | 1812         | 2,520    | For filing a request for reexamination                                     |          |
| 1804         | 920*     | 1804         | 920*     | Requesting publication of SIR prior to Examiner action                     |          |
| 1805         | 1,840*   | 1805         | 1,840*   | Requesting publication of SIR after Examiner action                        |          |
| 1251         | 120      | 2251         | 60       | Extension for reply within first month                                     |          |
| 1252         | 450      | 2252         | 225      | Extension for reply within second month                                    |          |
| 1253         | 1020     | 2253         | 510      | Extension for reply within third month                                     |          |
| 1254         | 1,590    | 2254         | 795      | Extension for reply within fourth month                                    |          |
| 1255         | 2,160    | 2255         | 1080     | Extension for reply within fifth month                                     |          |
| 1401         | 500      | 2401         | 250      | Notice of Appeal   |          |
| 1402         | 500      | 2402         | 250      | Filing a brief in support of an appeal                                     |          |
| 1403         | 1000     | 2403         | 500      | Request for oral hearing   |          |
| 1452         | 500      | 2452         | 250      | Petition to revive - unavoidable   |          |
| 1453         | 1500     | 2453         | 750      | Petition to revive - unintentional   |          |
| 1501         | 1400     | 2501         | 700      | Utility issue fee (or reissue)   |          |
| 1502         | 800      | 2502         | 400      | Design issue fee   |          |
| 1460         | 130      | 1460         | 130      | Petitions to the Commissioner  |          |
| 1807         | 50       | 1807         | 50       | Processing fee under 37 CFR 1.17 (q)                                       |          |
| 1806         | 180      | 1806         | 180      | Submission of Information Disclosure Stmt                                  | 180      |
| 8021         | 40       | 8021         | 40       | Recording each patent assignment per property (times number of properties) |          |
| 1809         | 790      | 2809         | 395      | Filing a submission after final rejection (37 CFR § 1.129(a))              |          |
| 1810         | 790      | 2810         | 395      | For each additional invention to be examined (37 CFR § 1.129(b))           |          |
| 1801         | 790      | 2801         | 395      | Request for Continued Examination (RCE)                                    |          |

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid SUBTOTAL (3) (\$180)

4. SEARCH/EXAMINATION FEES

| Fee Code | Fee (\$) | Fee Code | Fee (\$) | Fee Description         | Fee Paid |
|----------|----------|----------|----------|-------------------------|----------|
| 1111     | 500      | 2111     | 250      | Utility Search Fee      |          |
| 1112     | 100      | 2112     | 50       | Design Search Fee       |          |
| 1113     | 300      | 2113     | 150      | Plant Search Fee        |          |
| 1114     | 500      | 2114     | 250      | Reissue Search Fee      |          |
| 1311     | 200      | 2311     | 100      | Utility Examination Fee |          |
| 1312     | 130      | 2312     | 65       | Design Examination Fee  |          |
| 1313     | 160      | 2313     | 80       | Plant Examination Fee   |          |
| 1314     | 600      | 2314     | 300      | Reissue Examination Fee |          |

SUBTOTAL (4) (\$0)

SUBMITTED BY

|                   |                |                                   |                  |           |                |
|-------------------|----------------|-----------------------------------|------------------|-----------|----------------|
| Name (Print/Type) | John E. Curtin | Registration No. (Attorney/Agent) | 37,602           | Telephone | (703) 668-8000 |
| Signature         |                | Date                              | January 12, 2005 |           |                |

Complete (if applicable)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.



FORM HDP-1449 (Based on Form PTO-1449)

**PATENT AND TRADEMARK OFFICE  
INFORMATION DISCLOSURE CITATION**

(Use several sheets if necessary)

Sheet 1 of 1

ATTORNEY DOCKET NO.

SERIAL No.

29250-000986/US

09/599,194

APPLICANT

Nathan M. DENKIN et al.

FILING DATE

GROUP

June 22, 2000

2633

**U.S. PATENT DOCUMENTS**

| Ref. Desig. | Examiner's Initials | Document Number | Date      | Name      | Class/ Subclass | (If appropriate) Filing Date |
|-------------|---------------------|-----------------|-----------|-----------|-----------------|------------------------------|
| 1.          |                     | 5,818,629       | 10/6/1998 | Kinoshita |                 |                              |

**FOREIGN PATENT DOCUMENTS**

| Ref. Desig. | Examiner's Initials | Document Number | Date | Country | Class/ Subclass | Translation Yes | No |
|-------------|---------------------|-----------------|------|---------|-----------------|-----------------|----|
| 1.          |                     |                 |      |         |                 |                 |    |

**OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)**

| Ref. Desig. | Examiner's Initials |  |
|-------------|---------------------|--|
| 1.          |                     | F. S. Yang et al., "Nonlinear Crosstalk and Two Countermeasures in SCM-WDM Optical Communication Systems," Journal of Lightwave Technology, IEEE, New York, Vol. 18, No. 4, April 2000, pages 512-520.                             |
| 2.          |                     | L. Rapp, "Impact of Stimulated Raman Scattering in WDM Systems Using Different Types of Fibres," AEU International Journal of Electronics and Communications, Gustav Fisher Verlag, JENA, DE, Vol. 52, No. 5, 1998, pages 302-309. |

Examiner:

Date Considered:

EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.